

# COUNTRY ANALYSIS BRIEFS

## Bahrain

Last Updated: March 2011

### Background

***Despite its relatively low volumes of oil production, Bahrain's oil sector accounts for about 70 percent of total government revenues.***

Bahrain is a small island located off the coast of Saudi Arabia's Eastern Province. Despite its minor role as an oil producer, the country's economy depends heavily on hydrocarbon exports, mostly refined products. Petroleum production and refining account for more than 60 percent of Bahrain export receipts, and 70 percent of government revenues.

The vast majority of Bahrain's total energy consumption comes from natural gas, with the remainder supplied by oil. Hydrocarbons also provide the foundation for Bahrain's two major industries: refining and aluminum smelting.



### Oil

***Bahrain, the oldest oil producer in the Persian Gulf, exports much of its oil in the form of refined petroleum products rather than crude oil.***

Bahrain's proven oil reserves stood at 125 million barrels as of January 2011, according to Oil and Gas Journal, all of which are located in the Awali field. In addition to the 46,000 barrels per day (bbl/d) produced in its territory, Bahrain and Saudi Arabia share the 300,000 bbl/d of oil production from the offshore Abu Safah field. This figure is counted in Saudi oil production figures, but half of the output is allocated to Bahrain.

#### Oil Imports and Exports

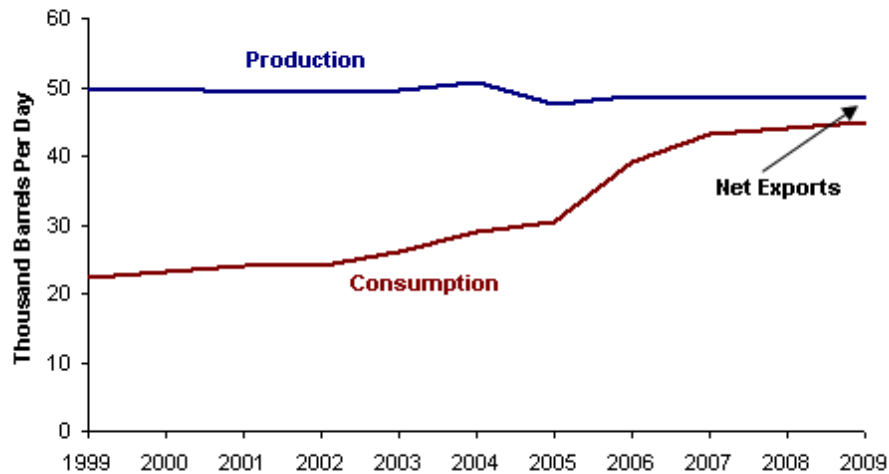
Unlike other Gulf states, Bahrain exports refined petroleum products rather than crude oil. Bahrain's domestic oil pipeline network is rather limited, focused primarily on delivering crude oil from the Awali field to the refinery at Sitra. Because domestic production is much lower than the country's refining capacity, Bahrain imports about 210,000 bbl/d of Arab Light crude oil from Saudi Arabia via a subsea pipeline linking the two countries. Bahrain Petroleum Company (Bapco) refines this crude oil and exports much of it via tanker. Most of Bahrain's exports go to India and other Asian markets. Joint Bahrain-Saudi Arabian crude oil production from the offshore Abu Safah field is sold from the Ras Tanura terminal in Saudi Arabia, the world's largest export terminal.

#### Production

Bahrain's production remained relatively stable over the last decade, while domestic consumption

surged, resulting in decreased exports, particularly since 2005. As Bahrain's economy diversifies and energy consumption grows in petrochemical and aluminum production, exports likely will continue to decrease. Exports from Bahrain fell from 27,000 bbl/d in 2005 to 3,000 bbl/d in 2009.

### Bahrain's Total Oil Production and Consumption, 1999-2009



Source: Energy Information Administration

In 2010, Bahrain produced an estimated 46,000 bbl/d of total oil liquids, of which 35,000 bbl/d was crude oil. This amount excludes joint production from the Abu Safah field, of which Bahrain's share is about 150,000 bbl/d. During 2010, Bahrain consumed an estimated 45,000 bbl/d of oil.

Bahrain is one of the oldest oil-producing countries in the Persian Gulf. Current crude oil production is entirely from the Awali field and is well below the country's peak production of 75,000 bbl/d in the 1970s. To help offset continuing declines in oil output, Bapco announced that it will drill numerous new wells at the Awali field in 2011. In October 2009, Bapco formed a joint operating company with Occidental, Tatweer Petroleum Company, which has commenced drilling for oil in 2010 in the Awali field.

### Sector Organization

Bahrain's oil sector is dominated by state-owned Bahrain Petroleum Company (Bapco), which is charged with the exploration, production, refining, marketing, and distribution of Bahraini oil for domestic use and the international market. The National Oil and Gas Authority (NOGA) is the primary body with regulatory and oversight authority as well as policymaking functions for the oil sector. A NOGA holding company administers the government's stakes in various energy companies, including the government's 100 percent stake in Bapco, 75 percent in Banagas, 60 percent stake in Bafco (the aviation fuel company) and its one-third share of Gulf Petrochemical Industries Company.

### Refining

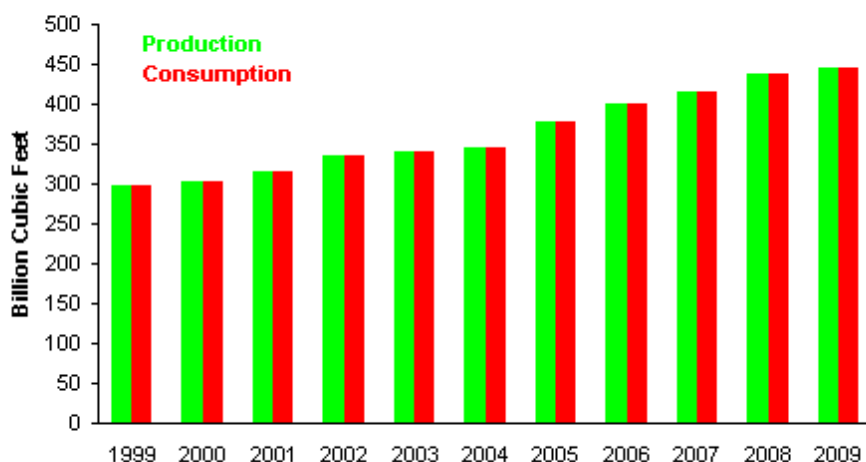
Bahrain has 262,000 bbl/d of refining capacity at the Bapco-owned Sitra facility, according to Oil and Gas Journal. Plans for the expansion of the Refinery include laying new pipelines to import crude from Saudi Arabia and increasing refining capacity at the facility. About one-sixth of the crude used by the refinery originates from the Bahrain oilfield and the rest is pumped from Saudi Arabia via a 33-mile pipeline. This aging pipeline will be decommissioned after the construction of the "New Arabia" pipeline, a 71-mile, 350,000-450,000-bbl/d capacity feed running between Saudi Arabia's Abqaiq oil processing center and Bahrain's refinery at Sitra.

### Natural Gas

Bahrain's proven natural gas reserves stood at 3.25 trillion cubic feet (Tcf) as of January 2011, according to Oil and Gas Journal, much of it associated gas from the Awali oil field. In 2009, the country produced and consumed 444 billion cubic feet (Bcf) of natural gas.

***Bahrain has modest natural gas reserves, and it consumes all the natural gas that it produces.***

## Bahrain's Natural Gas Production and Consumption, 1999-2009



Source: Energy Information Administration

### Sector Organization

The Bahrain National Gas Company (Banagas) was established in 1979 to capture associated natural gas at the Awali oilfield that had previously been flared. Bahrain formed Banagas to process associated gas into marketable products and supply residual gas for local industrial use. Banagas is three-quarters state-owned, with the remainder owned by the Arab Petroleum Investment Corporation (APIC) and Caltex Bahrain (Chevron) at 12.5 percent each.

### Production and Consumption

Bahrain consumes all of its natural gas production domestically in power plants, enhanced oil recovery (EOR) projects, or in heavy industry, where natural gas is used as a feedstock. The largest domestic consumer of natural gas is Aluminum Bahrain (Alba), which is one of the largest aluminum smelters in the world. Alba also operates a large natural gas-fired power plant. Banagas operates a two-train gas processing plant, which has the capacity to process 300 million cubic feet of gas per day. The processing plant extracts propane, butane and naphtha from associated gas (from oil wells) at the plant. Liquefied propane and butane are transferred to refrigerated storage tanks located at the Sitra port for ship loading, while naphtha is sent to the Bahrain Petroleum Refinery (Bapco) for storage and subsequent export.

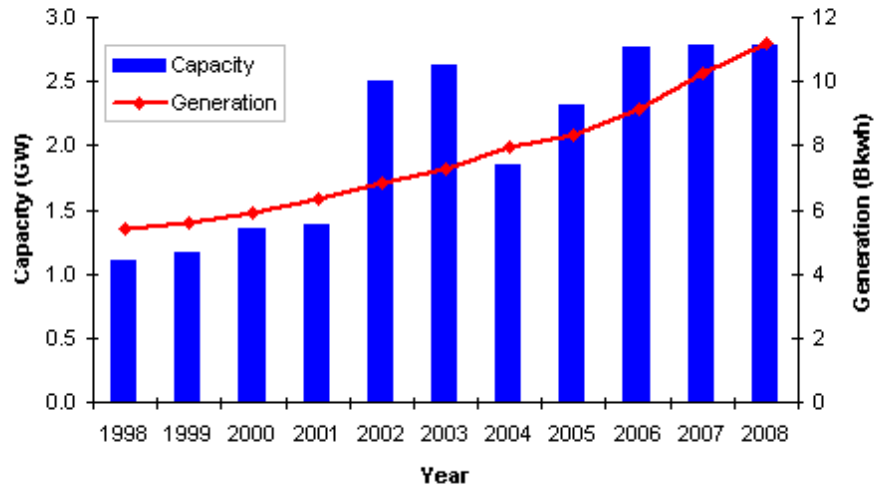
Natural gas demand in Bahrain has grown rapidly in recent years and is expected to continue to do so in the coming years as a result of greater natural gas requirements for power plants and energy-intensive domestic industry. To help meet rising demand, NOGA is leading an effort to increase the country's natural gas supply. Over the last five years, annual production has grown by an average of 5 percent, however Bahrain will need to increase its natural gas production more significantly to keep up with the rising demand. In the interim, the government is seeking out supply agreements with neighboring countries.

## Electricity

***Bahrain was integrated into the Gulf Cooperation Council power grid in 2009, ensuring adequate electricity supply even in emergencies.***

In 2009, Bahrain had 2.8 gigawatts (GW) of installed electric generating capacity. All of Bahrain's electricity was generated with conventional thermal sources, mostly natural gas with some oil. In total, 11.2 billion kilowatthours of electric power was generated in 2009. Bahrain's electricity generation grew by an average of 9 percent over the last five years, and Bahrain's Electricity and Water Authority (EWA) expects this level of growth throughout this decade. However, following generation capacity expansion in 2005 and 2006, growth has slowed. To help meet rising demand, Bahrain encouraged independent power projects (IPPs) and allowed the privatization of some state-owned power sector assets. Bahrain's first IPP power station, the natural gas-fired Al Ezzel plant started commercial operations in 2006 and accounted for about a third of total generating capacity in 2009, according to the EWA.

### Bahrain's Electricity Generation and Installed Capacity, 1998-2008



Source: Energy Information Administration

#### Gulf Cooperation Council (GCC) Electricity Grid

The Gulf Cooperation Council (GCC) outlined plans for a unified power grid in 2004 and the first phase of the project was completed in the first quarter of 2009, linking the grids of Saudi Arabia, Qatar, Bahrain, and Kuwait. The remaining GCC members, United Arab Emirates and Oman are expected to be fully integrated into the grid by the end of 2011. This project could secure power supply even in emergencies, while reducing the cost of power generation in member countries.

## Profile

### Energy Overview

<b>Proven Oil Reserves (January 1, 2011)</b>	125 million barrels
<b>Oil Production (2010)</b>	46,000 barrels per day, of which 76% was crude oil.
<b>Oil Consumption (2009)</b>	45,000 barrels per day
<b>Crude Oil Distillation Capacity (2009)</b>	262,000 barrels per day
<b>Proven Natural Gas Reserves (January 1, 2011)</b>	3.25 trillion cubic feet
<b>Natural Gas Production/Consumption (2009)</b>	444 billion cubic feet
<b>Recoverable Coal Reserves (2008)</b>	None
<b>Coal Production (2009)</b>	None
<b>Coal Consumption (2009)</b>	None
<b>Electricity Installed Capacity (2009)</b>	2.8 gigawatts
<b>Electricity Production (2009)</b>	11.2 billion kilowatt hours
<b>Electricity Consumption (2009)</b>	10.5 billion kilowatt hours
<b>Total Energy Consumption (2008)</b>	0.55 quadrillion Btus*, of which Natural Gas (85%), Oil (15%)
<b>Total Per Capita Energy Consumption (2008)</b>	762.4 million Btus
<b>Energy Intensity (2008)</b>	26,142 Btu per \$2000-PPP**

### Oil and Gas Industry

<b>Organization</b>	Bahrain Petroleum Company (Bapco); Bahrain Natural Gas Company (Banagas)
<b>Major Oil Fields</b>	Awali (32,192 bbl/d)(2009)
<b>Major Refineries</b>	Sitra (253,650 bbl/d)

\* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power.

\*\*GDP figures from Global Insight estimates based on purchasing power parity (PPP) exchange rates.

## Links

### U.S. Government

[CIA World Factbook - Bahrain](#)

[US State Department Consular Information Sheet - Bahrain](#)

[US State Department](#)

[Bahrain e-Government Portal](#)

[Embassy of Bahrain in Washington, DC](#)

[National Oil & Gas Authority \(NOGA\)](#)

### Oil and Natural Gas

[Bahrain National Gas Company \(Banagas\)](#)

[Bahrain Petroleum Company \(Bapco\)](#)

## Sources

A1SaudiArabia.com

Argus Petroleum Weekly

Bahrain National Gas Company

Bahrain News Agency

Bahrain Petroleum Company

Bahrain Tribune

Business Insider

CIA World Factbook

Dow Jones Newswires

Global Insight

Global Trade Atlas

FACTS Global Energy

Financial Times

Gulf News

International Energy Agency

Middle East Economic Survey

Oil & Gas Journal

Petroleum Economist

Petroleum Intelligence Weekly

Power Magazine

U.S. Energy Information Administration

World Gas Intelligence

## Contact Info

[cabs@eia.gov](mailto:cabs@eia.gov)

(202)586-8800

[cabs@eia.gov](mailto:cabs@eia.gov)